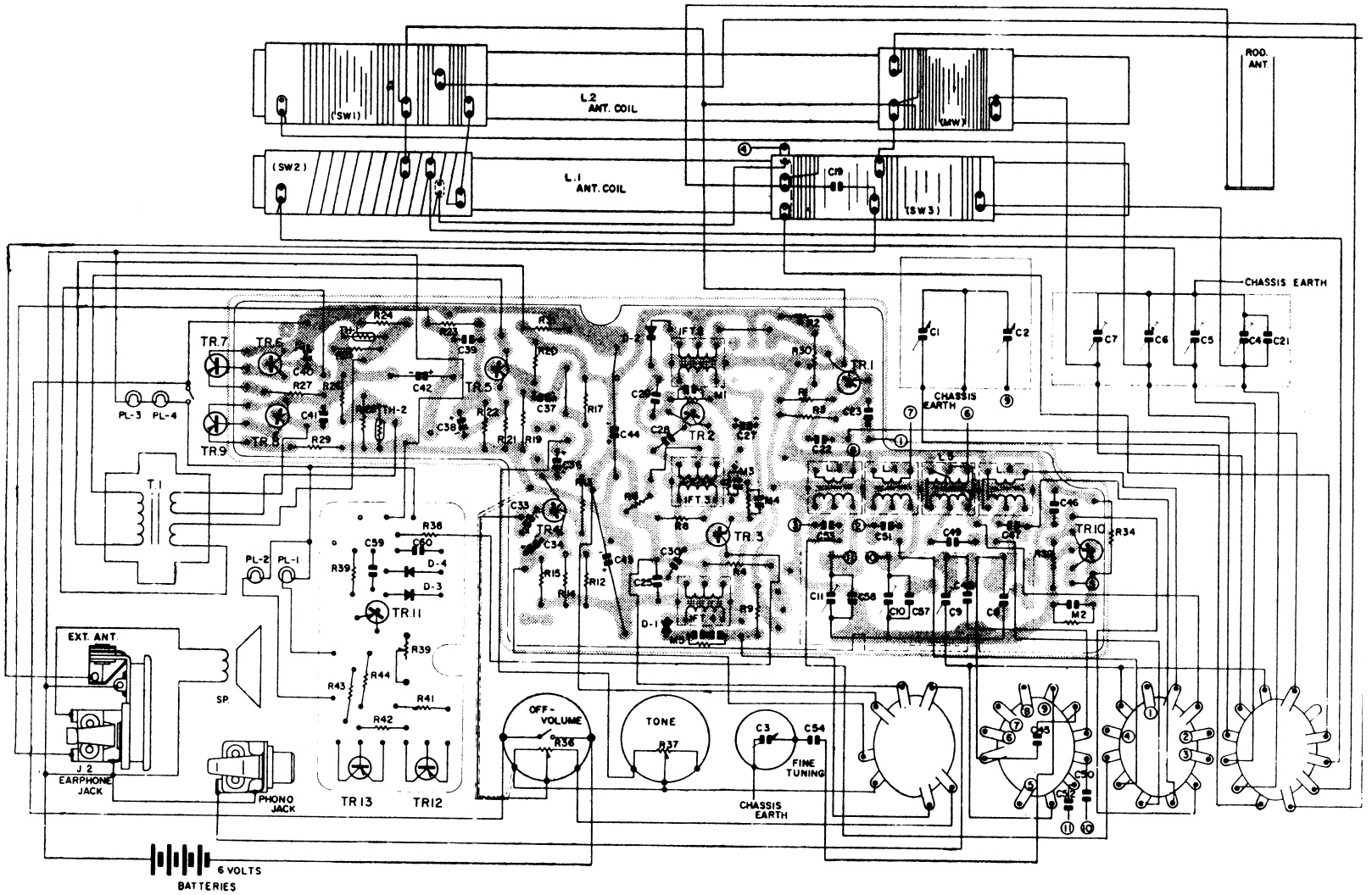
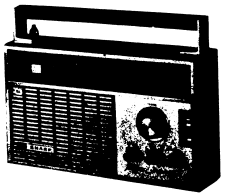
P. C. B. BOTTOM


(SW1)
L2 ANT. COIL
(SW2)
L1 ANT. COIL
(SW3)
ROD ANT.
CHASSIS EARTH
TR.1
TR.2
TR.3
TR.4
TR.5
TR.6
TR.7
TR.8
TR.9
TR.10
TR.11
TR12
TR13
T1
PL-1
PL-2
PL-3
PL-4
TH-1
TH-2
EXT. ANT.
SP.
J2 EARPHONE JACK
PHONO JACK
6 VOLTS BATTERIES
OFF-VOLUME
R36
TONE
R37
C3
C54
FINE TUNING
CHASSIS EARTH
C1
C2
CHASSIS EARTH
C7
C6
C5
C4
C21
C46
R34
M2

SHARP BZ-23



CAPACITANCE VALUES
· · · · · · P : PF OR μμF
NO UNIT MARKS : μF
RESISTANCE VALUES
· · · · · OHMS

TR.NO	NAME	COLL(V)	BASE(V)	EMITT(V)
TR.1	2SA352	5.6	0.58	0.61
TR.2	2SA12A	4.9	0.39	0.25
TR.3	2SA12C	5.7	0.43	0.27
TR.4	2SB75	4.7	0.47	0.35
TR.5	2SB75	4.0	1.11	0.91
TR.6	2SB155	5.7	3.3	3.2

TR.NO.	NAME	COLL(V)	BASE(V)	EMITT(V)
TR.7	2SB155	5.7	3.2	3.0
TR.8	2SB155	3.0	0.38	0.24
TR.9	2SB155	3.0	0.24	0.01
TR.10	2SA234	3.9	1.25	1.1
TR.11	2SA12C	1.1		
TR.12	2SB77	2.4	1.1	0.78
TR.13	2SB77	4.5	0.7	0.35

TRANSISTOR VOLTAGES

TUNING RANGE
(1) MW 530 - 1650KC
(2) SW1 1.6 - 4.3 MC
(3) SW2 3.9 - 12 MC
(4) SW3 12 - 26.5MC
(5) PHONO

I.F
··· 455 KC

EXT. ANT
ROD. ANT.
C19 3p
ANT. COIL L.1
C21 6P
C4
C20 300p
C5
ANT. COIL L.2
C6
C7
C1
TUNING
TR.1 MIXER
C22 0.01
R1 5K
R2 40K
R3 1.2K
C23 0.02
TR.2 IF. AMP.
C28 10p
IFT-2
C13
C27 3V-30
C29 .02
M2
R6 2K
IFT-3
C14
C30 6p
M3
R8 50K
M4
.04
500
C25 0.04
R38 10K
C60 .04
IFT-4
C15
D-1
500
.02
.02
M5
J-1
PHONO JACK
R4 70K
R9 5K
PL-3
PL-4
COLOR INDICATOR (TR.NO 11,12,13)
TR.11 TR.12 TR.13
D-3
D-4
C59 .04
R39 300
R41 20
R40 20K
PL-1
R42 2K
R43 1K
R44 20
PL-2
TR.6
C39 .02
R23 420
R24
C40 .001 460
TR.7
T.1
TH.1
R25 200
R27 1
R26
460
C41 .001
C42 6V-500
J-2
EARPHONE JACK
SP.
SPEAKER
R28 200
TH-2
R29 1
TR.8 TR.9
OUT PUT (TR.NO 6,7,8,9.)
OSC COIL
L.3
C45 280p
C8
C48 2000p
L.4
C9
C49 500p
C47 200p
C50 1000p
L.5
C57 8p
C10
C51 .01
C53 .01
C52 300p
C58 6p
C11
L.6
C54 2p
C2
C3
R30 1.2K
C61 6V-30
C46 .02
TR.10 OSC.
.02
5K
M1
R34 10K
R32 1.5K
FINE TUNING
TR.4 AUDIO AMP.
R36 5K
C33 .5
C34 3V-5
R12 5K
R15 300
R13 50K
R14 1.2K
C36 .3
R37 5K
R17 2K
TR.5 DRIVE AMP.
C37 6V-5
R19 3K
R20 10K
R21 200
C38 3V-30
R22 10
C43 6V-200
TONE - VOLUME
OFF - VOLUME
R31 80
C44 6V-100
BATTERIES 6 Volts

SHARP BZ-23

ALIGNMENT INSTRUCTION

Should it become necessary at any time to check the alignment of this receiver, proceed as follows;

1) Connect an output meter across the speaker voice coil lugs.
2) Set volume control for maximum.
3) Use the lowest setting of signal generator capable of producing adequate indication on the lowest scale of output meter.
4) Use a non-metallic alignment tool.
5) Repeat adjustments to insure good results.

ALIGNMENT CHART

Signal generator				Receiver		Adjust
Step	Band	Connection to receiver	Input signal frequency	Dial setting	Remarks	
1	M.W.	Connect signal generator through a 10KΩ dummy to the antenna tuning condenser. Ground lead to the receiver chassis.	Exactly 455KC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Adjust for maximum output on speaker voice coil lugs.	3rd-IF Trans. core 2nd-IF Trans. core 1st-IF Trans. core
2	M.W.	Use radiating loop. Loop of several turns of wire, or place generator lead close to receiver for adequate signal pickup. Connect generator output to one end of this wire.	Exactly 520KC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	MW Oscillator core L6
3	M.W.	Same as step 2.	Exactly 1680KC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 1.	MW Oscillator trimmer C11
4	M.W.	Same as step 2.	Exactly 600KC. (400%, 30%, AM modulated.)	600 KC	See NOTE	MW Antenna coil L2
5	M.W.	Same as step 2.	Exactly 1400KC. (400%, 30%, AM modulated.)	1400 KC	See NOTE	MW Antenna trimmer C7
6	M.W.	Repeat steps 2,3,4 and 5 until no further improvement is obtained.				
7	S.W.1	Same as step 2.	Exactly 1.58MC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	SW1 Oscillator core L5
8	S.W.1	Same as step 2.	Exactly 4.5MC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 1.	SW1 Oscillator trimmer C10
9	S.W.1	Same as step 2.	Exactly 1.7MC. (400%, 30%, AM modulated.)	1.7 MC	See NOTE	SW1 Antenna coil L2
10	S.W.1	Same as step 2.	Exactly 3.7MC. (400%, 30%, AM modulated.)	3.7 MC	See NOTE	SW1 Antenna trimmer C6
11	S.W.1	Repeat steps 7,8,9 and 10 until no further improvement is obtained.				
12	S.W.2	Connect signal generator through a 10KΩ dummy to the external antenna coil lug. Ground lead to the receiver chassis.	Exactly 3.8MC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	SW2 Oscillator core L4
13	S.W.2	Same as step 12.	Exactly 12.2MC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 1.	SW2 Oscillator trimmer C9
14	S.W.2	Same as step 12.	Exactly 4.5MC. (400%, 30%, AM modulated.)	4.5 MC	See NOTE	SW2 Antenna coil L1
15	S.W.2	Same as step 12.	Exactly 10MC. (400%, 30%, AM modulated.)	10 MC	See NOTE	SW2 Antenna trimmer C5
16	S.W.2	Repeat steps 12,13,14 and 15 until no further improvement is obtained.				
17	S.W.3	Same as step 12.	Exactly 11.8MC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	SW3 Oscillator core L3
18	S.W.3	Same as step 12.	Exactly 27MC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 1.	SW3 Oscillator trimmer C8
19	S.W.3	Same as step 12.	Exactly 13MC. (400%, 30%, AM modulated.)	13 MC	Same as step 4.	SW3 Antenna coil L1
20	S.W.3	Same as step 12.	Exactly 23MC. (400%, 30%, AM modulated.)	23 MC	Same as step 4.	SW3 Antenna trimmer C4
21	S.W.3	Repeat steps 17, 18, 19 and 20 until no further improvement is obtained.				

NOTE

Check alignment of receiver antenna coil by bringing a piece of powdered iron (such as a coil slug) near the antnna loop stick then a piece of brass. If powdered iron increases output, loop requires more inductance. If brass increases output, loop requires less inductance, change loop inductance by sliding the bobbin toward the center of ferrite core to increase inductance, or away to decrease inductance.